RINGKASAN

Perusahaan memerlukan penaksiran sumberdaya untuk perencanaan penambangan pasir besi di PT. Tunas Sejati Mandiri, Desa Glempang Pasir, Kecamatan Adipala, Kabupaten Cilacap, Jawa Tengah. Data eksplorasi yang ada berupa data bor dan derajat kemagnetan. Data yang didapatkan, dianalisa agar dapat memberikan suatu gambaran endapan pasir besi dan jumlah tonase pasir besi di daerah penelitian tersebut.

Metode penelitian yang akan diterapkan dalam penelitian ini adalah penaksiran sumberdaya menggunakan metode *cross section* dengan membandingkan antara *Rule of Gradual Change* dan *Rule of Nearest Point*. Tujuannya untuk mengetahui berapa besar Sumberdaya pasir besi terukur.

Pasirbesi yang diteliti yaitu dengan ketebalan berkisar antara 0,3 - 5,1 m dengan derajat kemagnetan daerah penelitian antara 50% MD - 58% MD. Penyebaran pasirbesi di daerah penelitian menyebar ke segala arah dengan kadar yang bervariasi, kadar tertinggi berada di dekat pemukiman dan bentangan tanah pasir pada titik B-18 sebesar 58,7%. Kadar terendah berada di daerah sekitar tegalan dan persawahan pada titik B-23 sebesar 50,1 %. Ketebalan maksimum pada titik B-6 dengan ketebalan 5,1 m dan ketebalan minimum terdapat pada titik B-21 dengan ketebalan 0,3 m. Pedoman perubahan bertahap (*Rule of Gradual Change*) dilakukan dengan menghubungkan penampang satu dengan penampang lainnya, sehingga setiap perhitungan volume dibatasi oleh dua penampang dan diperoleh Sumberdaya seluruhnya sebesar 1.163.463,3 Ton. Pedoman titik terdekat (*Rule of Nearest Point*) dilakukan dengan penarikan garis batas penampang dengan cara setengah jarak antar penampang dan diperoleh Sumberdaya seluruhnya sebesar 1.163.467,6 Ton. Berdasarkan Standar Nasional Indonesia (SNI) SNI 13-4726-1998, Sumberdaya pasirbesi pada lokasi penelitian dapat diklasifikasikan sebagai Sumberdaya pasirbesi terukur.

Besarnya tanah penutup (*Overburden*) dengan Pedoman Perubahan Bertahap (*Rule of Gradual Change*) adalah 408.467,9 BCM dan Pedoman Titik Terdekat (*Rule of Nearest Point*) adalah 409.915,4 BCM.

Adanya perbedaan hasil dari ke dua pedoman maka disarankan hasil penaksiran sumberdaya pasir besi yang terkecil dipakai sebagai dasar perhitungan produksi. Walaupun dipilih yang terkecil diharapkan Sumberdaya tertambang kenyataan nantinya tidak lebih kecil dari hasil penaksiran sumberdaya pasir besi.

ABSTRACT

Enterprise have to conduct resources assessment of the iron sand mining in PT. Tunas Sejati Mandiri, Glempang Pasir Village, District Adipala, Cilacap, Central Java. Existing exploration data is drill data and degree of magnetization. Data which had obtained, analyzed in order to provide an overview of iron sand deposits and the amount of tonnage iron sand in the study area.

Research methods that will apply in this study is resources assessment by comparing method of cross section, Rule of Gradual Change and Rule of Nearest Point. The goal is to find out how much iron sand resources measured.

Iron sand that observed had thickness ranging from 0.3 to 5.1 m with degree of magnetism research areas between 50% MD - 58% MD. Iron sand deployment in research area spread in all directions at varying levels, the highest levels are in a stretch of land near the settlement and sand at the point of B-18 for 58.7%. Lowest levels are in the area around the moor and the rice fields at the point of B-23 for 50.1%. The maximum thickness at the point of B-6 with a thickness of 5.1 m and contained a minimum thickness at the point of B-21 with a thickness of 0.3 m. Guidelines for gradual change (Rule of Gradual Change) is done by connecting the cross-sectional one with another, so that any calculation of the volume bounded by two cross sections and obtain resources for all of 1,163,463.3 tons. Guidelines for nearest point (Rule of Nearest Point) performed with cross border demarcation by half the distance between cross sections and obtain resources for all of 1,163,467.6 tons. Based on the Standard National Indonesia (SNI) SNI 13-4726-1998, iron sand sources at the study site can be classified as measurable iron sand sources.

The amount of overburden with Rule of Gradual Change was 408,467.9 BCM and Rule of Nearest Point was 409,915.4 BCM.

Cause the difference results of the two guidelines so writer suggested result of the smallest iron sand sources are used as the basis for calculating the production. Although the smallest iron sand sources is chosen, hopefully in reality will not be smaller than the iron sand sources assessment.